Docket No.: 0230-0222PUS1

Art Unit: 1633

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- 1. (Cancelled).
- 2. (Currently Amended) The nucleoside or nucleotide according to claim 1, A nucleoside or nucleotide having a 5-substituted-2-oxo(1H)-pyridin-3-yl group as a base, wherein the 5-position of the base is substituted with a substituent selected from the group consisting of the following:
 - 1) a photoreactive group selected from iodine and bromine;
 - 2) an alkenyl group, an alkynyl group or an amino group, or a derivative thereof;
 - 3) biotin or a derivative thereof; [[and]]
 - 4) a fluorescent molecule selected from fluorescein, 6-carboxyfluorescein, tetramethyl-6-carboxyrhodamine, and derivatives thereof; and
 - 5) biotin, dichloroacetyl group, fluorescein, 6-carboxyfluorescein, tetramethyl-6-carboxyrhodamine, or derivatives thereof introduced via a linker selected from an aminoalkyl group, an aminoalkenyl group and an aminoalkynyl group.
- 3. (Currently Amended) The nucleoside or nucleotide according to claim [[1 or]] 2, wherein the 5-position of the base is substituted with 1) a photoreactive group selected from iodine and bromine, 2) an alkenyl group, an alkynyl group or an amino group, or a derivative thereof, or 3) biotin or a derivative thereof.

Application No. 10/521,454 Docket No.: 0230-0222PUS1
Reply to Office Action of October 3, 2007 Art Unit: 1633

4. (Currently Amended) The nucleoside or nucleotide according to any one of claims 1 to 3

claim 2 or 3, wherein the 5-position of the base is substituted with an iodine or biotin derivative.

5. (Currently Amended) A nucleic acid incorporating the nucleotide according to any one of

elaims 1 to 4 a nucleoside or nucleotide having a 5-substituted-2-oxo(1H)-pyridin-3-yl group as

a base, wherein the 5-position of the base is substituted with a substituent selected from the

group consisting of the following:

1) a photoreactive group selected from iodine and bromine;

2) an alkenyl group, an alkynyl group or an amino group, or a derivative thereof;

3) biotin or a derivative thereof;

4) a fluorescent molecule selected from fluorescein, 6-carboxyfluorescein, tetramethyl-6-

carboxyrhodamine, and derivatives thereof; and

5) biotin, dichloroacetyl group, fluorescein, 6-carboxyfluorescein, tetramethyl-6-

carboxyrhodamine, or derivatives thereof introduced via a linker selected from an

aminoalkyl group, an aminoalkenyl group and an aminoalkynyl group.

6. (Currently Amended) The nucleic acid according to claim 5, wherein the nucleotide

according to any one of claims 1 to 4 forms a base pair with a nucleotide having a 6-substituted

2-amino-purin-9-yl group as a base.

3

Application No. 10/521,454

Reply to Office Action of October 3, 2007

Docket No.: 0230-0222PUS1 Art Unit: 1633

7. (Original) The nucleic acid according to claim 6, wherein the 6-substituted 2-amino-purin-9-

yl group is a 2-amino-6-(2-thienyl)purin-9-yl group or a 2-amino-6-(dimethylamino)-purin-9-yl

group.

8. (Currently Amended) The nucleic acid according to claim 5, which is [[used]] suitable for

use as antisense DNA or RNA, a ribozyme or an aptamer.

9. (Original) The nucleic acid according to claim 5, which encodes all or part of a protein or

peptide.

10. (Currently Amended) A method for preparing a prepared nucleic acid incorporating the

nucleotide according to any one of claims 1 to 4, which comprises comprising:

effecting transcription, replication or reverse transcription by using, as a template, a

template nucleic acid containing a nucleotide having a 6-substituted 2-amino-purin-9-yl group as

a base, so that the nucleotide according to any one of claims 1 to 4 is incorporated at a site

complementary to the nucleotide having a 6-substituted 2-amino-purin-9 yl group as a base in

the presence of the nucleotide according to claim 2 or 3 to incorporate said nucleotide as a base

into said prepared nucleic acid at a site complementary to said 6-substituent 2-amino-purin-9-yl

group in said template nucleic acid.

4

Application No. 10/521,454 Reply to Office Action of October 3, 2007 Docket No.: 0230-0222PUS1

Art Unit: 1633

11. (New) The nucleic acid according to claim 5, wherein the nucleoside or nucleotide at the 5-

position of the base is substituted with 1) a photoreactive group selected from iodine and

bromine, 2) an alkenyl group, an alkynyl group or an amino group, or a derivative thereof, or 3)

biotin or a derivative thereof.

12. (New) The nucleic acid according to claim 5, wherein the nucleoside or nucleotide at the 5-

position of the base is substituted with an iodine or biotin derivative.

13. (New) The nucleoside or nucleotide according to claim 2, wherein the 5-position of the base

is substituted with a substituent selected from the group consisting of:

1) a photoreactive group selected from iodine and bromine;

2) an alkenyl group, an alkynyl group or an amino group;

3) biotin;

4) a fluorescent molecule selected from fluorescein, 6-carboxyfluorescein, and

tetramethyl-6-carboxyrhodamine; and

5) biotin, dichloroacetyl group, fluorescein, 6-carboxyfluorescein, or tetramethyl-6-

carboxyrhodamine introduced via a linker selected from an aminoalkyl group, an

aminoalkenyl group and an aminoalkynyl group.

5

Application No. 10/521,454 Docket No.: 0230-0222PUS1
Reply to Office Action of October 3, 2007 Art Unit: 1633

14. (New) The nucleic acid according to claim 5, wherein the 5-position of the base is

substituted with a substituent selected from the group consisting of:

1) a photoreactive group selected from iodine and bromine;

2) an alkenyl group, an alkynyl group or an amino group;

3) biotin;

4) a fluorescent molecule selected from fluorescein, 6-carboxyfluorescein, and

tetramethyl-6-carboxyrhodamine; and

5) biotin, dichloroacetyl group, fluorescein, 6-carboxyfluorescein, or tetramethyl-6-

carboxyrhodamine introduced via a linker selected from an aminoalkyl group, an

aminoalkenyl group and an aminoalkynyl group.

15. (New) The method according to claim 10, wherein the 5-position of the base is substituted

with a substituent selected from the group consisting of:

1) a photoreactive group selected from iodine and bromine;

2) an alkenyl group, an alkynyl group or an amino group;

3) biotin;

4) a fluorescent molecule selected from fluorescein, 6-carboxyfluorescein, and

tetramethyl-6-carboxyrhodamine; and

5) biotin, dichloroacetyl group, fluorescein, 6-carboxyfluorescein, or tetramethyl-6-

carboxyrhodamine introduced via a linker selected from an aminoalkyl group, an

aminoalkenyl group and an aminoalkynyl group.

6